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| 09/770,491 | 01/29/2001 | Janne Kallio | 59864 00527 | 7373 |

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| EXAMINER | |
|---|---|
| DAGOSTA, STEPHEN M | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2683 | |

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/770,491 | KALLIO, JANNE | |
| | Examiner | Art Unit | |
| | Stephen M. D'Agosta | 2683 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *15 September 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-11 and 13-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,5,7,9-11 and 17-22* is/are rejected.

7)☒ Claim(s) *3, 6, 8, 13-16 and 23-30* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments filed 9-15-2005 have been fully considered but they are not persuasive.

1. With regard to page 1 remarks, the previous Office Action was a Non-Final action and the "claim objections" pointed out novel claims. Another Non-Final Office Action is not required. The applicant can always phone the primary examiner if non-prosecutorial issues require clarification.

2. The applicant argues the references do not teach claim 1, specifically:

"..roams between said GSM network and said wireless LAN in either an IDLE mode or an ACTIVE mode while said Mobile Station (MS) remains accessible to other devices without action bv a user of said Mobile Station (MS)..".

The primary examiner disagrees since this claim is difficult to interpret as to what the applicant means by remaining accessible. The examiner stated that an idle mode handoff is just that, ie. a handoff while the mobile is idle, and does not require any user intervention. This is a very well known concept. Is the applicant stating that mobile user intervention is required in order to assist in a handover as a user roams? If so, please provide support for this statement in the next office action. Hence the examiner states that IDLE/ACTIVE mode handovers are taught (and are well known) and still allow the device to remain accessible (ie. to a call).

3. The examiner disagrees with the applicant regarding claim 2. The cited prior art taught roaming between cellular/WLAN systems and Anderson taught location updates as the user roamed. Hence the rejection is upheld.

4. The examiner disagrees with the applicant regarding claims 5, 7 and 9. The examiner shows where Ray teaches measuring the BTS's in support of a handover, note that this requires BTS/BSC/HLR/MSC interaction as well:

"..Ray teaches a GSM MSC sends a request to the MS via the serving base station asking the MS to change its frequency and transmit a measurement report from the neighboring cells) of the new wireless systems) back to the GSM base station. The GSM base station checks the measurement report for each potential target base station, and selects the best target base station with which to perform the handover..."

5. The examiner disagrees with the applicant regarding claims 4, 17 and 20. The examiner shows where the cited art teaches the claims and how they are combined, hence he is not swayed by the applicant's generalization that this is not taught. For claim 17, the art does teach the claim since Harrison teaches cellular/WLAN handovers, which can occur at Idle and Active times. Jawanda, Anderson and Ray are provided to cure the deficiencies of Harrison as per the Office Action whereby Jawanda teaches seamless roaming support, Anderson teaches use of location updates during roaming and Ray teaches measuring BTS's.

6. The previous office action is attached for informational purposes only.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claims 1, 10-11 and 21-22** rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison et al. US 5,796,727 further in view of Jawanda US 6,243,581 (hereafter Harrison and Jawanda).

As per **claim 1**, Harrison teaches a network architecture and method (abstract teaches apparatus and method) for WIO applications (figure 2) comprising,

A WLAN comprising a WMC arranged to serve as a WLAN access point (C1, L34-43 and C11, L14-20 teaches a wireless LAN which inherently requires an access point/transceiver and routing hardware/WMC to provide access to a user – the examiner notes that Harrison's disclosure of a WLAN provides for the WAB #46 in figure 2 to be a WMC except that it would provide wireless access),

A GSM network comprising a mobile station (MS) in a form of a dual-mode cell phone to access both WLAN and GSM technologies, a BTS to convert a mobile radio signal, a MSC arranged to establish call connection (figure 2 and C11, L14-46 – a cellular network inherently has a MSC and BTS),

A handover module implemented in either the MS or WMC for providing seamless mobility between said GSM network and said WLAN when MS roams between said GSM network and WLAN (C11, L14-46 – handover is either mobile-initiated or system-initiated as is known in the art) **but is silent on** in either IDLE mode or ACTIVE mode while said mobile remains accessible to other devices without action by a user of said mobile.

Jawanda teaches seamless roaming between wireless networks (title) whereby a network arbitrator (eg. handover module) routes data to first and second networks (abstract). Figure 4, #102, #120, #130 and #132 teach the system seamlessly connecting the user to the different networks typically during ACTIVE mode. One skilled understands that idle-mode handoffs are well known in the art and hence the mobile device would handoff when in IDLE mode if the user roams from one network to another.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Harrison, such that handoff occurs in either IDLE mode or ACTIVE mode while said mobile remains accessible to other devices without action by a user of said mobile, to provide means for seamless operations to occur without requiring user intervention.

As per **claim 10**, Harrison teaches a network architecture (abstract teaches apparatus/method while figure 1-2 teach a architecture) for WIO applications (figure 2) comprising,

A local radio network comprising a WMC arranged to serve as a WLAN access point (C1, L34-43 and C11, L14-20 teaches a wireless LAN which inherently requires an access point/transceiver and routing hardware/WMC to provide access to a user – the examiner notes that Harrison's disclosure of a WLAN provides for the WAB #46 in figure 2 to be a WMC except that it would provide wireless access),

A cellular network comprising a mobile station operable in both local and cellular network (figure 2 and C11, L14-46 teaches the mobile capable of cellular (outdoor) RF connectivity and LAN (indoor) RF connectivity))

A handover module implemented in either the mobile or local radio network to provide seamless mobility between local network and cellular network when mobile roams between local and mobile networks (C11, L14-46 – handover is either mobile-initiated or system-initiated as is known in the art) **but is silent on** in either IDLE mode or ACTIVE mode while said mobile remains accessible to other devices without action by a user of said mobile.

Jawanda teaches seamless roaming between wireless networks (title) whereby a network arbitrator (eg. handover module) routes data to first and second networks (abstract). Figure 4, #102, #120, #130 and #132 teach the system seamlessly connecting the user to the different networks typically during ACTIVE mode. One skilled understands that idle-mode handoffs are well known in the art and hence the mobile device would handoff when in IDLE mode if the user roams between networks.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Harrison, such that handoff occurs in either IDLE mode or ACTIVE mode while said mobile remains accessible to other devices without action by a user of said mobile, to provide means for seamless operations to occur without requiring user intervention.

As per **claim 11**, Harrison teaches claim 10 wherein;

Said local radio network corresponds to a WLAN that is located in hotspot areas or where higher bit rate or higher QoS is desired and uses a radio technology that is different from cellular network (Harrison's teaching of the mobile connecting to a wireless LAN reads on hot spot capability [eg. IEEE802.11, Bluetooth, etc.] since it will provide a higher bit rate and QoS for LAN communications is well known in the art and disclosed by Harrison, see abstract "various classes of data communication services").

As per **claim 21**, Harrison teaches a network architecture (figures 1-2 and abstract), comprising;

A first wireless network comprising an entity arranged to serve as an access point (figure 2 shows cellular network comprising mobiles and MTSO, left side of page);

A second wireless network comprising a MS to access the first wireless network and the second wireless network (figures 1-2 and C1, L34-43 and C11, L14-20 teaches a wireless LAN which inherently requires an access point/transceiver and routing hardware/WMC to provide access to a user – the examiner notes that Harrison's

disclosure of a WLAN provides for the WAB #46 in figure 2 to be a WMC except that it would provide wireless access), and

A handover module implemented at one of the first and second wireless networks to provide seamless mobility between the second wireless network and the first wireless network, when the mobile roams between the second and first networks (C11, L20-48) **but is silent on** in either IDLE mode or ACTIVE mode while said mobile remains accessible to other devices without action by a user of said mobile.

Jawanda teaches seamless roaming between wireless networks (title) whereby a network arbitrator (eg. handover module) routes data to first and second networks (abstract). Figure 4, #102, #120, #130 and #132 teach the system seamlessly connecting the user to the different networks typically during ACTIVE mode. One skilled understands that idle-mode handoffs are well known in the art and hence the mobile device would handoff when in IDLE mode if the user roams from one network to another.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Harrison, such that handoff occurs in either IDLE mode or ACTIVE mode while said mobile remains accessible to other devices without action by a user of said mobile, to provide means for seamless operations to occur without requiring user intervention.

As per **claim 22**, Harrison teaches claim 21 wherein;

Said first wireless network corresponds to a WLAN comprising said entity as a WMC to serve as an access point (C11, L14-20 teaches a wireless LAN which inherently requires an access point/transceiver and routing hardware/WMC to provide access to a user – the examiner notes that Harrison's disclosure of a WLAN provides for the WAB #46 in figure 2 to be a WMC except that it would provide wireless access); and

Said second wireless network corresponds to a GSM network comprising the MS in the form of a dual mode cell phone to access both WLAN and GSM radio technologies, a BTS and MSC to establish call connection (C11, L14-48 teaches a mobile with dual-mode capability to connect to cellular, eg. GSM, network and WLAN. A cellular system inherently requires a BTS and MSC).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claims 2, ~~12-13 and 23~~** rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison/Jawanda as applied to claims 1, 11 or 22 above, and further in view of Andersson et al. US 6,230,017 (hereafter Andersson).

As per **claim 2**, Harrison teaches claim 1 wherein during an IDLE mode when the MS roams from the GSM network to the WLAN, the MS selects a WLAN radio (C11, L43-48 teaches needing to establish communications with at least one MTSO if communications are to flow outside the LAN environment which reads on the claim, and also C11, L20-29. Also the examiner points out that a VLR function would provide feedback to the HLR as well) **but is silent on** attempts a location update via said WLAN and a new location of the MS is updated at the MSC.

Anderson teaches a telecommunications network with a MSC/HRL and as the mobile station travels into a location area that is handled by a different mobile switching center, a location update operation must occur so that both the home location register (HLR) and a visitor location register (VLR), typically at the mobile switching center, have appropriate current information about the mobile station and its whereabouts. In this regard, when a mobile station travels into an area having a different location identifier, a forced registration typically occurs. In the forced registration, the home location register (HLR) is updated regarding the particular mobile switching center now serving the mobile station. (C1, L35-49).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Harrison, such that a location update is performed, to provide the system the ability to continually track the mobile unit as it roams for registration purposes.

**IDLE and ACTIVE mode operations are well known in the art and provide means for the cell phone to perform various house-keeping functions and/or support functions at different times, ie. when either IDLE or ACTIVE.*

**Claims ~~3, 5, 7, 9, 14, 16, 24, 26 and 28-30~~** rejected under 35 U.S.C. 103(a) as being unpatentable over Harriso/Jawanda as applied to claims 1, 11 or 22 above, and further in view of Ray et al. US 6,424,638 (hereafter Ray).

As per **claim 5**, Harrison teaches claim 1 wherein during ACTIVE handover mode when the MS initiates a handover from said WLAN to said cellular (eg. GSM) network (C11, L14-48 where L43-48 teaches handoff from GSM-to-WLAN and WLAN-to-GSM which reads on the claim) **but is silent on** the MS measures GSM neighbor cells, enables transmission of a handover request to the MSC via WMC of said WLAN until the MS is handed over to said GSM network.

Ray teaches a GSM MSC sends a request to the MS via the serving base station asking the MS to change its frequency and transmit a measurement report from the neighboring cell(s) of the new wireless system(s) back to the GSM base station. The GSM base station checks the measurement report for each potential target base station, and selects the best target base station with which to perform the handover (C6, L1-20).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Harrison, such that measurements are made by the mobile and a handover is performed (ie. between network components MSC, BSC/BTS, WAB/WMC, etc), to provide the switching capability from one cell to another and/or from one network to another.

**IDLE and ACTIVE mode operations are well known in the art and provide means for the cell phone to perform various house-keeping functions and/or support functions at different times, ie. when either IDLE or ACTIVE.*

As per **claim 7**, Harrison teaches claim 1 wherein during ACTIVE handover mode when the MS initiates a handover from the GSM network to the WLAN:

said MS is handed over to said WLAN.(C11, L14-48 where L43-48 teaches handoff from GSM – WLAN and/or WLAN – GSM which reads on the claim,

**but is silent on**

the MS measures GSM neighbor cells, reports measurement results, determineds if a WLAN transmission level exceeds a limit and if said level exceeds a limit, last a WLAN cell first in said measurement results,

said BTS receives said measurement results and indicates a handover to a WLAN cell

Ray teaches a GSM MSC sends a request to the MS via the serving base station asking the MS to change its frequency and transmit a measurement report from the neighboring cell(s) of the new wireless system(s) back to the GSM base station. The GSM base station checks the measurement report for each potential target base station, and selects the best target base station with which to perform the handover (C6, L1-20). The examiner notes that Ray's BTS selects the best target, eg. lists it as being first in the neighbor list.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Harrison, such that measurements are made by the

mobile and a handover is performed, to provide the switching capability from one cell to another and/or from one network to another.

**IDLE and ACTIVE mode operations are well known in the art and provide means for the cell phone to perform various house-keeping functions and/or support functions at different times, ie. when either IDLE or ACTIVE.*

As per **claim 9**, Harrison teaches claim 1 wherein during ACTIVE handover mode when the MS initiates a handover from the WLAN to said GSM network:

Said MS is handed over to said GSM network (C11, L14-48 where L43-48 teaches handoff from GSM – WLAN and WLAN – GSM)

**But is silent on**

Said MS measures WLAN cells and informed GSM neighbor cells and sends an indication if a WLAN transmission level drops below limit,

Said WMC calculates the best GSM target cell and starts a handover,

Said BTS sends GSM neighbor cells to said MS in response to a handover attempt.

Ray teaches a GSM MSC sends a request to the MS via the serving base station asking the MS to change its frequency and transmit a measurement report from the neighboring cell(s) of the new wireless system(s) back to the GSM base station. The GSM base station 25a checks the measurement report for each potential target base station 25b, and selects the best target base station 25b with which to perform the handover (C6, L1-20).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Harrison, such that the MS measures WLAN cells and informed GSM neighbor cells and sends an indication if a WLAN transmission level drops below limit, WMC calculates the best GSM target cell and starts a handover, BTS sends GSM neighbor cells to said MS in response to a handover attempt, to provide the switching capability from one cell to another and/or from one network to another based on threshold measurements.

**IDLE and ACTIVE mode operations are well known in the art and provide means for the cell phone to perform various house-keeping functions and/or support functions at different times, ie. when either IDLE or ACTIVE.*

**Claims 4, ~~6, 15,~~ 17-20, ~~25 and 27~~** rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison/Jawanda in view of Andersson as applied to claims 1, 11, 17 or 22 above, and further in view of Ray et al. US 6,424,638 (hereafter Ray).

As per **claim 4**, Harrison teaches claim 1 wherein during IDLE mode when the MS roams from said WLAN to said GSM network, the MS selects a GSM radio (C11, L14-48, where L43-48 teaches handoff from GSM – WLAN and WLAN – GSM which reads on the claim) **but is silent on** the WMC informs GSM neighbor cells and attempts a location update via said GSM network and a new location of the MS is updated at the MSC.

Anderson teaches a telecommunications network with a MSC/HRL and as the mobile station travels into a location area that is handled by a different mobile switching center, a location update operation must occur so that both the home location register (HLR) and a visitor location register (VLR), typically at the mobile switching center, have appropriate current information about the mobile station and its whereabouts. In this regard, when a mobile station travels into an area having a different location identifier, a forced registration typically occurs. In the forced registration, the home location register (HLR) is updated regarding the particular mobile switching center now serving the mobile station. (C1, L35-49)

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Harrison, such that a location update is performed, to provide the system the ability to continually track the mobile unit as it roams for registration purposes.

Ray teaches a GSM MSC sends a request to the MS via the serving base station asking the MS to change its frequency and transmit a measurement report from the neighboring cell(s) of the new wireless system(s) back to the GSM base station. The GSM base station 25a checks the measurement report for each potential target base station 25b, and selects the best target base station 25b with which to perform the handover (C6, L1-20).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the combination of Harrison and Anderson, such that the WMC informs GSM neighbor cells, to provide the switching capability from one cell to another and/or from one network to another.

**IDLE and ACTIVE mode operations are well known in the art and provide means for the cell phone to perform various house-keeping functions and/or support functions at different times, ie. when either IDLE or ACTIVE.*

As per **claim 17**, Harrison teaches a method for providing seamless mobility for a MS between a GSM network having a BTS and a MSC and a WLAN comprising a WMC arranged to serve as a WLAN access point (figures 1-2 and C1, L34-43 and C11, L14-20 teaches a wireless LAN which inherently requires an access point/transceiver and routing hardware/WMC to provide access to a user – the examiner notes that Harrison's disclosure of a WLAN provides for the WAB #46 in figure 2 to be a WMC except that it would provide wireless access), comprising;

**But is silent on**

Comprising a WMC arranged to serve as a WLAN access point,

During IDLE mode in said GSM network, selecting a WLAN radio and requesting a location update at said MSC via said WLAN;

Alternatively in said WLAN, selecting a GSM radio and requesting a location update at said MSC via said GSM network;

During an ACTIVE handover mode, measuring GSM neighbor cells to report a WLAN cell as an ordinary GSM cell, sending a handover request to said MSC of said GSM network via BTS of GSM network, until a handover is completed in said WLAN,

Alternatively, measuring GSM neighbor cells and sending a handover request to said MSC via a WMC of said WLAN until said handover is completed in said GSM network **but is silent** wherein said mobile remains accessible to other devices without action by a user of said mobile.

Jawanda teaches seamless roaming between wireless networks (title) whereby a network arbitrator (eg. handover module) routes data to first and second networks (abstract). Figure 4, #102, #120, #130 and #132 teach the system seamlessly connecting the user to the different networks typically during ACTIVE mode. One skilled understands that idle-mode handoffs are well known in the art and hence the mobile device would handoff when in IDLE mode if the user roams from one network to another and remains accessible to other devices without action by the user.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Harrison, such that handoff occurs in either IDLE mode or ACTIVE mode while said mobile remains accessible to other devices without action by a user of said mobile, to provide means for seamless operations to occur without requiring user intervention.

Anderson teaches a telecommunications network with a MSC/HRL and as the mobile station travels into a location area that is handled by a different mobile switching center, a location update operation must occur so that both the home location register (HLR) and a visitor location register (VLR), typically at the mobile switching center, have appropriate current information about the mobile station and its whereabouts. In this regard, when a mobile station travels into an area having a different location identifier, a forced registration typically occurs. In the forced registration, the home location register (HLR) is updated regarding the particular mobile switching center now serving the mobile station. (C1, L35-49). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the combination of Harrison and Wu, such that a location update is performed, to provide the system the ability to continually track the mobile unit as it roams for registration purposes.

Ray teaches a GSM MSC sends a request to the MS via the serving base station asking the MS to change its frequency and transmit a measurement report from the neighboring cell(s) of the new wireless system(s) back to the GSM base station. The GSM base station 25a checks the measurement report for each potential target base station 25b, and selects the best target base station 25b with which to perform the handover (C6, L1-20).

The examiner notes that mobile phones inherently perform housekeeping activities IDLE mode while performing operations in ACTIVE mode, hence the mobile would perform location updates in IDLE mode and handoff procedures during ACTIVE mode.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify the combination of Harrison, Wu and Anderson, such that the WMC informs GSM neighbor cells, to provide the switching capability from one cell to another and/or from one network to another.

As per **claim 18,** Harrison teaches claim 17 wherein said MS is a dual-mode phone operable in both WLAN and GSM networks (C11, L14-16).

As per **claim 19,** Harrison in view of Wu, Anderson and Ray teaches claim 17 wherein said WLAN is located in hotspot areas or where higher bit rate or higher QoS is desired and uses a radio technology that is different from GSM (Harrison's teaching of the mobile connecting to a wireless LAN reads on hot spot capability [eg. IEEE802.11, Bluetooth, etc.] since it will provide a higher bit rate and QoS for LAN communications is well known in the art).

As per **claim 20**, Harrison in view of Wu, Anderson and Ray teaches claim 17 wherein said MS and said WMC are implemented with a Handover module for controlling said MS to handover seamlessly between said WLAN and said GSM network when said MS roams between said WLAN and said GSM network (C11, L14-48 teaches MS operating and handing-off between both WLAN and cellular systems. One skilled realizes that both mobile-initiated and system-initiated handoffs are known in the art).

## *Allowable Subject Matter*

Claims 3, 6, 8, 13-16 and 23-30 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

## *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta
Primary Examiner
9-26-2005